

Researchers ID molecule linked to aggressive cancer growth, spread

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Researchers at the University of Michigan Comprehensive Cancer Center have found a genetic marker that controls an enzyme present in aggressive and metastatic cancer. The study suggests an absence of microRNA-101 is related to high expression of the protein EZH2, which was previously shown to be active in metastatic cancers. MicroRNA's are molecules that help regulate gene expression. miR-101 is one of few miRNA's shown to play such an important role in the development of cancer.

In this study, the researchers found miR-101 is significantly underexpressed in a variety of cancers, including prostate and breast cancer. Essentially, the researchers believe that miR-101 suppresses the EZH2 protein. When miR-101 is lost in cancer, EZH2 expression is uncontrolled, and that haywire in-gene expression leads to more aggressive cancer growth.

The findings suggest that loss of miR-101 could potentially be used as a marker of aggressive or metastatic cancer. Replacement of miR-101 in cancers could also be developed as a future cancer treatment.

The study will be published online in the journal *Science* on Nov. 13. It was led by Arul M. Chinnaiyan, M.D., Ph.D., director of the Michigan Center for Translational Pathology and investigator of the Howard Hughes Medical Institute.

Source: University of Michigan

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